

Application Serial No. 10/608,508
Date October 7, 2004
Reply to Office Action dated June 7, 2004

Page 11 of 13

REMARKS

In the Office Action dated June 6, 2004, the response time to which has been extended by a concurrently filed request for a one month extension of time and fee, a restriction requirement has been made. Claims 1-7, 11, 12, and 16-26 are rejected under 35 U.S.C. §102(b). Claims 13-15 and 27 are rejected under 35 U.S.C. §103(a). Claims 8-10 are objected to, but are indicated as being allowable if rewritten in independent form.

For the following reasons, it is respectfully submitted that Applicants' invention as set forth in the claims includes features which are not anticipated and rendered obvious by the cited references, taken singly or in any of the combinations posed by the Examiner. Reconsideration is, therefore, respectfully requested.

Restriction has been made between apparatus of claims 1-27 and method claims 28-40. The Examiner contends that the heating apparatus can be made by a materially different process than that of the method claims.

Applicant traverses the restriction requirement and requests that all claims 1-40 remain in the application for examination. The Examiner contends that the heating apparatus can be made by a materially different process, such as by attaching or thermally coupling the heating means to the outside of the thermally conductive mass instead of mounting the heater means in the thermally conductive mass.

While the heater means could be placed outside of the mass as proposed by the Examiner, this is not Applicants' invention. Mounting the heater means outside of the mass without any thermal coupling is opposed to the teaching of Applicants' invention.

Thus, it is submitted that the apparatus and method claims define a single invention. Withdrawal of the restriction requirement is, therefore, respectfully requested.

Claims 1-6 and 18-22 are rejected under 35 U.S.C. §102(b) as being anticipated by Roller. The Examiner contends that Roller discusses the heating plate made of a thermally conductive mass of cast or extruded aluminum or aluminum alloy or equivalents known in the art. However, it is respectfully submitted that Applicants' invention as set forth in claims 1-6 and 18-22 includes features which are not anticipated by Roller.

While Roller discloses the formation of the heating plate of aluminum or aluminum alloy, Roller is devoid of any teaching or suggestion of forming a thermally conductive mass of a low porosity material. As set forth in paragraphs 64-

Application Serial No. 10/608,508
Date October 7, 2004
Reply to Office Action dated June 7, 2004

Page 12 of 13

70 of Applicants' specification, the use of a low porosity material eliminates voids in the thermal mass thereby creating a higher thermal conductivity mass making the overall apparatus more efficient in terms of heat transfer storage and heat transfer capability.

Since Roller is devoid of any teaching or suggestion of the use of a low porosity material for the mass, it is respectfully submitted that Applicants' invention as set forth in claims 1-6 and 18-22 patentably defines over Roller.

Claims 1, 2, 16, 17, and 22-26 are rejected under 35 U.S.C. §102(b) as being anticipated by Barkley. The Examiner cites Barkley essentially for teaching the flow path construction in a heater apparatus.

It is respectfully submitted that Barkley is devoid of any use of a low porosity material to form the thermally conductive mass. Barkley specifically describes the heat exchange elements 14 and 16 as having a low mass and formed of a metal, e.g. bronze or tellurium-copper alloy. Barkley is devoid of any teaching or suggestion of forming a thermally conductive mass of a low porosity material for increased heat storage and heat transfer capability as set forth by the Applicants in the claims. As such, it is respectfully submitted that Applicants' invention set forth in claim 1, 2, 16, 17, 20, and 22-26 patentably defines over Barkley and is not anticipated thereby.

Claims 1, 2, 7, 11, and 12 are also rejected under 35 U.S.C. §102(b) as being anticipated by Wu. However, Wu states only that the main body 1 is formed of a metallic material. Wu is devoid of any teaching or suggesting of forming the main body of a low porosity material for increased heat storage and heat transfer capability as set forth by the Applicants in the enumerated claims.

Since Wu is devoid of this feature of Applicants' invention, it is respectfully submitted that Applicants' invention as set forth in claims 1, 2, 7, 11, and 12 patentably defines over Wu.

Claims 13-15 and 27 are rejected under 27 USC §103(a) as being unpatentable over Barkley in view of Rocchitelli or unpatentable over Wu.

Claims 13-15 depend from claim 1. Claim 27 includes the same low porosity thermal conductive mass of claim 1. For the same reasons set forth above with respect to the patentability of claim 1 over the cited references, it is respectfully submitted that Applicant's invention as set forth in claims 13-15 and 27 patentably defines over the cited references as combined by the Examiner.

Application Serial No. 10/608,508
Date October 7, 2004
Reply to Office Action dated June 7, 2004

Page 13 of 13

New claims 41-47 are likewise submitted to patentably define over each of the references or combination of references posed by the Examiner due to the use of a low porosity material to form a thermally conductive mass as well as the specific thermal conductive mass construction set forth in these claims.

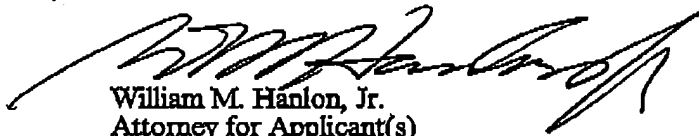
For these reasons, it is respectfully submitted that Applicant's invention as set forth in new claims 41-47 patentably defines over the cited references and is not anticipated or rendered obvious thereby.

Claims 8 and 9 have each been amended to independent form including all of the features of the base claim and any intervening claim. As such, it is respectfully submitted that claims 8 and 9, as well as claim 10 which depends from claim 9, are now in allowable condition as indicated by the Examiner in the Office Action.

In conclusion, for the reasons set forth above, it is respectfully submitted that Applicant's invention as set forth in claims 1-7 and 11-47 includes features which are not anticipated or rendered obvious by the cited references. Thus, claims 1-47 are submitted to be in condition for allowance; a notice of which is respectfully requested.

Respectfully submitted,

YOUNG, BASILE, HANLON, MacFARLANE, WOOD
& HELMHOLDT, P.C.



William M. Hanlon, Jr.
Attorney for Applicant(s)
Registration No. 28422
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084-3107

Dated: October 7, 2004
WMH/jao

1